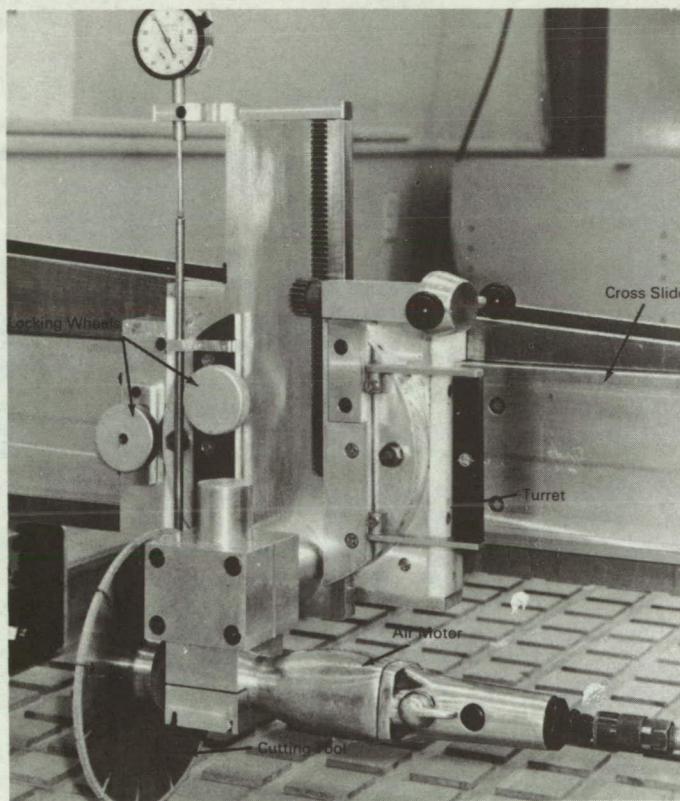


# NASA TECH BRIEF



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## Versatile Machine Mills, Saws Light Materials



### The problem:

To design one machine that will perform angle cuts, flat and profile milling, machining of grooves and slots, and edge trimming of phenolic panels.

### The solution:

A versatile milling/sawing machine mounted on rails above a large table equipped with a vacuum capability for holding a workpiece.

### How it's done:

A table of aluminum plate has cork squares with bleed ports affixed to its surface. Attached to the table is a rail running its full length of 14 feet on one side and a second rail used for a steady rest on the other. A crossarm, riding on the two rails, mounts the machinery to perform the various cutting and milling tasks. A turret is mounted on a slide on the crossarm and can be positioned at any point above the table

(continued overleaf)

by movement lengthwise of the crossarm and crosswise of the turret. An air motor in the turret head drives the cutting tool, which can be swung in a 90° arc from a vertical to a horizontal plane. Locking wheels are provided to secure the cutting tool in a given angular position as to the table top and lateral position along the cross slide.

**Notes:**

1. This device can machine panels up to 56 by 144 inches or up to 3 smaller panels, since the vacuum system in the cork squares is divided into 3 sections.

2. Inquiries concerning this invention may be directed to:

Technology Utilization Officer  
Marshall Space Flight Center  
Huntsville, Alabama 35812  
Reference: B66-10364

**Patent status:**

Inquiries about obtaining rights for the commercial use of this invention may be made to NASA, Code GP, Washington, D.C. 20546.

Source: Joseph A. Rauschl  
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